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AIR POLLUTION REPORT
FEDERAL FACILITIES

CHATTANOOGA

INTERSTATE AIR QUALITY CONTROL REGION

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The status is presented of the Federal facilities in the Region regarding implementation of the objectives prescribed by the Clean Air Act and Executive Order 11507. A quantitative evaluation of emissions, data on fuel burning and refuse disposal, and abatement plans are included. A summary by county of the fuel use is given. Pollutant emissions are summarized by county. This Region was subsequently redesignated and its boundaries expanded, hence, the data do not reflect Federal facility emissions data for the counties of: Bartow, Chattooga, Cherokee, Fannin, Floyd, Gilmer, Gordon, Haralson, Murray, Paulding, Pickens, Polk, Whitfield in Georgia, which have been added to the region.

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Particles
Hydrocarbons

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"AIR POLLUTION REPORT ON FEDERAL FACILITIES IN THE METROPOLITAN CHATTANOOGA INTERSTATE AIR QUALITY CONTROL REGION", June, 1970.

This inventory was prepared consistent with the report entitled "Consultation on the Metropolitan Chattanooga Interstate Air Quality Control Region", December 1969, and the geographical designation of April 10, 1970. On March 31, 1971, in line with the concept of including the entire United States in these geographical units called Air Quality Control Regions, this Region was subsequently redesignated and its boundaries expanded by the Environmental Protection Agency. Hence, the data presented herein do not reflect Federal facility emissions data for the counties of: Bartow, Chattooga, Cherokee, Fannin, Floyd, Gilmer, Gordon, Haralson, Murray, Paulding, Pickens, Polk, Whitfield in Georgia, which have been added to the region.

Federal Sources Branch
Division of Compliance
Environmental Protection Agency

November 2, 1971

AIR POLLUTION REPORT
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CHATTANOOGA

INTERSTATE AIR QUALITY CONTROL REGION

ROBERT S. RUSSO

FEDERAL FACILITIES BRANCH
DIVISION OF ABATEMENT
NATIONAL AIR POLLUTION CONTROL
ADMINISTRATION

JUNE 1970

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NARRATIVE

The Chattanooga Interstate Air Quality Control Region was designated pursuant to section 107(a) of the Clean Air Act, as amended, on April 12, 1969. It encompasses all of Catoosa, Dade and Walker counties in Georgia and Hamilton county in Tennessee. A map of the region is shown in Figure 1.

This report presents the status of the Federal facilities in the Region regarding implementation of the objectives prescribed by the Clean Air Act and Executive Order 11507. A quantitative evaluation of emissions, data on fuel burning and refuse disposal, and abatement plans are included. The data in this report reflect that most recently available.

The 15 facilities in the region are listed in Table I along with data on fuel burning and refuse disposal for each. A summary by county of the fuel use is given in Table II. The total fuel use for Federal facilities in the region is: 72 thousand gallons distillate oil and 311 million cubic feet natural gas.

Pollutant emissions are summarized by county in Table III. The facilities emit a total of 710 tons sulfur oxides (SOX), 11000 tons nitrogen oxides (NOX), 6 tons carbon monoxide (CO), 40 tons particulates (PART) and 4 tons hydrocarbons (HC) per year. As compared to all other sources in the region, Federal facilities emit approximately .2% of all particulates, 6.9% of all SOX and negligible % of all CO. Data is unavailable for NOX comparison - the Federal contribution is very large. Those facilities which emit more than 100 tons of any pollutant per year (point sources) are listed in Table IV.

Volunteer Army Ammunition Plant, is the only Federal facility in the region with air pollution problems. These were reported, as shown in Table VI, along with proposed abatement measures in their 1968 - 1973 five year plan. Progress has been made in controlling some processes and other abatement measures are awaiting funding.

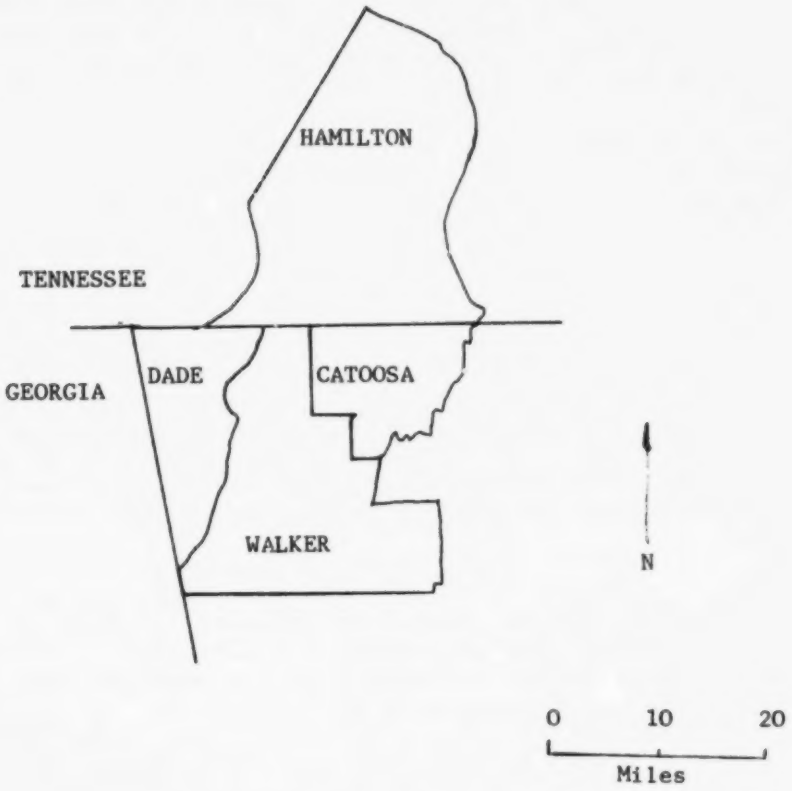

FIGURE 1

CHATTANOOGA INTERSTATE

AIR QUALITY CONTROL REGION

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
GEORGIA CATOOSA RINGGOLD							
FAA FLT AID	0.	0.	0.	0.	0.	0.	NO FUEL BURN
GEORGIA CATOOSA NO CITY ID							
ARMY RIFLE RANGE	0.	0.	0.	0.	0.	0.	NO FUEL BURN
GEORGIA DADE NO CITY ID							
TVA RADIO ST	0.	0.	0.	0.	0.	0.	NO FUEL BURN
GEORGIA WALKER LA FAYETTE							
POST OFFICE S MAIN ST	0.	0.	41.	0.	0.	0.	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
GEORGIA							
WALKER							
ROSSVILLE							
POST OFFICE	0.	0.	0.	3655.	0.	0.	
TENNESSEE							
HAMILTON							
CHATTANOOGA							
AF LOVELL FIELD	0.	0.	0.	0.	0.	0.	INACTIVE
ARMY AMMO PLANT	0.[a]	4800.	3060000.[b]	0.	0.	0.	
ARMY CEMETRY	0.	0.	0.	0.	0.	0.	NO FUEL BURN
CHATT NAT PK	0.	0.	15000.	12600.	0.	0.	

a. Quantity of waste explosives open-burned unavailable.

b. Gas use is for Farmer's Chemical Co., who supplies steam to the Ammunition Plant.

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NAVY RESERVE TRAIN CTR	0.	0.	0.	19252.	0.	0.	
PO & CT HSE 10TH & GA	0.	0.	1370.	0.	0.	0.	
TVA GARAGE	0.	0.	0.	10000.	0.	0.	
TVA POWER SERVICE CTR	0.	0.	0.	0.	0.	0.	NO FUEL BURN
US ARMY RESERVE CTR	0.	0.	0.	22000.	0.	0.	
USCG DEPOT	0.	0.	0.	4000.	0.	0.	

TABLE II

ANNUAL FUEL USE BY FEDERAL FACILITIES

	COAL (TONS)	RESID OIL (GAL)	DIST OIL (GAL)	GAS (MCF)
GEORGIA				
CATOOSA	0.	0.	0.	0.
DADE	0.	0.	0.	0.
WALKER	0.	0.	3655.	41.
TENNESSEE				
HAMILTON	0.	0.	67852.	3076370.
TOTAL	0.	0.	71507.	3076411.

TABLE III

FEDERAL CONTRIBUTION TO AIR POLLUTION
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
GEORGIA					
CATOOSA	1.	1.	1.	1.	1.
DADE	1.	1.	1.	1.	1.
WALKER	1.	1.	1.	1.	1.
STATE TOTAL	3.	3.	3.	3.	3.
TENNESSEE					
HAMILTON	710.	11000.	3.	40.	1.
STATE TOTAL	710.	11000.	3.	40.	1.
AREA TOTAL	710.	11000.	6.	40.	4.

TABLE IV

FEDERAL POINT SOURCES
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
TENNESSEE					
HAMILTON					
ARMY AMMO PLANT	710.	11000.	3.	40.	1.

TABLE V

ABATEMENT PROGRAM FOR FEDERAL PROBLEM AREAS IN
THE CHATTANOOGA INTERSTATE AIR QUALITY CONTROL REGION

A. Problem
B. Abatement measures proposed in the five year plan*
C. Abatement measures needed but not reported in the plan
D. Abatement measures accomplished or in progress

TENNESSEE

HAMILTON COUNTY

CHATTANOOGA

Volunteer Army Ammunition Plant

A. 1. TNT production area (10 lines, 6 recovery units)
2. Sulfuric acid concentration plant(7 gas-fired furnaces)
3. Oleum-sellite plant (stack from Brink mist eliminator)
4. Nitric acid concentration plant (2 stacks)
5. Ammonia oxidation plant (8 stacks)
6. Red water incineration plant (12 incinerators - 8 operating)
7. Open burning area

B. 1. a. The construction and installation of a new acid/fume recovery unit for pressurized absorption/adsorption of NO_x from the existing batch line recovery units which are presently overloaded.
b. The construction and installation of necessary equipment for pressurized absorption/adsorption of NO_x from existing batch line recovery units.
c. The construction and installation of necessary equipment for the collection and adsorption of NO_x from the existing batch wash house stacks.
2. The construction and installation of mist eliminator equipment for the abatement of sulfuric acid mist emissions from the sulfuric acid concentration facilities.

*1968-73 plan per Executive Order 11282
superseded by Executive Order 11507.

CHATTANOOGA (CONT'D)

3. a. Installation of instrumentation for the process control of soda ash and sellite operation at the sellite plant to reduce air emission from stack.
   b. Construction and installation of an absorption tower for sellite manufacture and reduction of SO_2 emissions to the atmosphere.
4. Construction and installation of gas-fired incineration equipment for the elimination of NO_x emissions from the nitric acid concentration facilities.
5. Construction and installation of catalytic combustion equipment for the elimination of NO_x emissions from the ammonia oxidation plant facilities.
7. a. Construction and installation of incineration facilities for disposal of inert material.
   b. Open burning of waste explosives is currently the only safe disposal method.

D. 1. Additional columns were added to recovery units. Piping enlarged at recovery units. Control instrumentation completed at recovery units. Pressurized absorption/adsorption system study for recovery units completed.
2. Mist-pads for three Mahon filters installed. One SAC furnace changed from oil fired to gas fired.
4. Control instrumentation installed on NAC units.
5. Control instrumentation installed on AOP units.
6. Wet scrubbers installed on redwater incinerators. Four incinerators changed from oil fired to gas fired.

REFERENCES AND NOTES

1. Duprey, R.L., Compilation of Air Pollutant Emission Factors, Public Health Service Publication No. 999-AP-42, 1968.

   All calculated emissions are based on these factors.

2. Report for Consultation on the Chattanooga Interstate Air Quality Control Region, Public Health Service, December, 1969.

   Data on emissions from all sources used to calculate per cent government contribution were obtained from this report.

3. Clean Air Act, as amended (42 U.S.C. 1857 - 1857L), Sec 107, Sec 111. November 21, 1967.

4. Executive Order 11507, Prevention, Control, and Abatement of Air and Water Pollution of Federal Facilities, February 4, 1970.

5. Title 42 - Public Health, Chapter I, Subchapter F, Part 76, June 2, 1966.

6. Bureau of the Budget Circular A-76, August 6, 1966, and as revised May 18, 1970.

*U. S. GOVERNMENT PRINTING OFFICE : 1970— 436-612/7